CLAIMS

1. A method for identifying a compound for modulating the cellular activity or location of PTPL1, comprising the step of identifying a compound that modulates the interaction of PTPL1 with TAPP; or which modulates or mimics the interaction of TAPP with PtdIns(3,4)P_2; or which modulates the cellular location of TAPP.

2. The method of claim 1 wherein the method comprises the step of using molecular modelling means to select or design a compound that is predicted to interact with the phosphoinositide binding domain of TAPP, wherein a three-dimensional structure of at least a part of the phosphoinoisitide binding domain of the TAPP is compared with a three-dimensional structure of a compound, and a compound that is predicted to interact with the said phosphoinositide binding domain is selected.

3. The method of claim 2 wherein the three-dimensional structure of at least a part of the phosphoinositide binding domain of the TAPP is a three-dimensional structure of at least a part of the phosphoinositide binding site of the TAPP and a compound that is predicted to interact with the said phosphoinositide binding site is selected.

4. The method of claim 1 wherein the method comprises the steps of exposing a TAPP or PTPL1 polypeptide to a test compound; and determining whether the test compound modulates the interaction of PTPL1 with TAPP; or modulates or mimics the interaction of TAPP with PtdIns(3,4)P_2; or modulates the cellular location of TAPP.

5. The method of claim 1 or 5 wherein the TAPP comprises the C-terminal PH domain of human TAPP1 or TAPP2 and the three or four most C-terminal residues of full length human TAPP1 or TAPP2; and wherein the PTPL1 comprises the PDZ1 and/or PDZ5 domain of human PTPL1 and optionally also the phosphatase domain of human PTPL1.

6. The method of any one of claims 1, 4 or 5 comprising the step of using a fluorescence-based assay system.

7. A method for selecting a compound for modulating signalling *via* PtdIns(3,4)P_2, the method comprising the step of identifying a compound which modulates the interaction between TAPP and PTPL1 or the intracellular location of PTPL1.

8. The method of claim 7 wherein the method comprises the steps of exposing a TAPP or PTPL1 polypeptide to a test compound; and determining whether the test compound modulates the interaction between TAPP and PTPL1 or the intracellular location of PTPL1.

9. A kit of parts useful in carrying out a screening method of the invention comprising TAPP or a polynucleotide encoding TAPP, and PTPL1 or a polynucleotide encoding PTPL1.

10. A method for modulating the cellular activity or location of PTPL1, the method comprising the step of exposing the PTPL1 to a compound that modulates the interaction of PTPL1 with TAPP; or that modulates or mimics the interaction of TAPP with PtdIns(3,4)P_2; or that modulates the cellular location of TAPP.

11. The method of claim 10 performed *in vitro*.

12. A method for modulating signalling *via* PtdIns(3,4)P_2, the method comprising the step of exposing the PTPL1 to a compound which modulates the interaction between TAPP and PTPL1 or the intracellular location of PTPL1.

13. The method of claim 12 performed *in vitro*.

14. The use of a compound that inhibits the interaction of PtdIns(3,4)P_2 with TAPP or that inhibits the interaction of TAPP with PTPL1 in the manufacture of a medicament for treating diabetes, inhibition of apoptosis, treatment of ischaemic disease, wound healing or nerve regeneration.

15. The use of a compound that promotes the interaction of TAPP with PtdIns(3,4)P_2 or that mimics the effect of PtdIns(3,4)P_2 on TAPP, or that promotes the interaction of TAPP with PTPL1 in the manufacture of a medicament useful in promoting apoptosis, for example in treating cancer or in the resolution of inflammation.

16. A method of treating a patient with diabetes or in need of inhibition of apoptosis, for example in the treatment of ischaemic disease, wound healing or nerve regeneration, wherein the patient is administered an effective amount of a compound that inhibits the interaction of PtdIns(3,4)P_2 with TAPP or that inhibits the interaction of TAPP with PTPL1.

17. A method of treating a patient in need of promotion of apoptosis, for example in treating cancer or in the resolution of inflammation, wherein the patient is administered an effective amount of a compound that promotes the interaction of TAPP with PtdIns(3,4)P_2 or that mimics the effect of PtdIns(3,4)P_2 on TAPP, or that promotes the interaction of TAPP with PTPL1.